

## **GSFC DAAC MODIS Version 2 SSI&T Overview (Oct. 23, 1997)**

### **Schedule:**

#### Phase I

- \* October 1 (DAAC has in-house V2 early SSI&T capability based on existing testbed)
- \* **October 30 (drop #1 “Rump” version of ECS operational at DAAC)**
- \* November 15 (existing DAAC SSI&T testbed dismantled only if drop #1 has equivalent or greater SSI&T capability)
- \* November 30 (drop #2 SSI&T & I/F version of ECS operational at DAAC)

#### Phase II

- \* **January 31 (drop #3 launch version of ECS release operational at DAAC)**
- \* **March 2 (official deadline for DAAC to submit PGE’s for ECS qualification testing)**
- \* **March 2 to April 15 (provisional acceptance of PGE’s for system certification; additional PGE’s may be accepted only if SSI&T procedures are completed successfully)**
- \* March (drop #4 - new ECS capability - unclear that DAAC would accept delivery for launch)

#### Phase III

- \* **April 15 (last day for DAAC to receive new PGE’s from SDST in time to complete SSI&T in time for launch) the number of PGE’s that we can accept is TBD**
- \* **April 16 to June 1 (certification testing; possible SSI&T scheduled unavailability; DAAC continues SSI&T for at-launch PGE’s using TBD capability)**
- \* **June 1 to Sept 1 (launch freeze -- no new ECS functionality, bug fixes only; DAAC continues SSI&T for post-launch PGE’s)**
- \* **May 1 (last date for DAAC to accept 2.1 versions of PGE’s in time for launch - assume that DAAC had previously completed SSI&T for 2.0 version)**

### **Prerequisites - GSFC DAAC Resources and Capabilities:**

- \* **continuity of access to required SSIT hardware and software** capability with no schedule impact from other concurrent activities (Oct 1 thru April 15)
  - (Oct 1 to Nov 15) existing DAAC SSI&T testbed will be used for early V2 SSI&T
  - (Oct 30 to Jan 31) ECS “Rump” version will be used
  - (Jan 31 to Apr 15) launch release of ECS (drop #3) will be used
  - (Apr 15 to June 1) is TBD depending on impact of certification testing
- \* **starting by or before January 31 DAAC has capability to run at least three modes** (ops, SSI&T, and test); capability to test and run multiple PGE's within mode management; CM control of ECS baseline required to avoid excessive regression testing
- \* expanded GSFC DAAC SSIT staff from 5 to 8 by Nov 30
- \* continued key staff support availability from ECS SDE Office (SB, JZ)
- \* **system capacity to do full chain and performance testing starting Jan 31**

### **Prerequisites - MODIS PGE’s:**

- \* **version 2 PGE’s conform to SSI&T agreement and ESDIS software standards upon delivery**; this avoids remedial rework by DAAC and SDST (saves as much as 11 days from integration)
- \* **MAPI version used with V2 PGE’s is operational at DAAC** with delivery of first PGE or before
- \* **MODIS ESDT’s are complete and finalized as of delivery to the GSFC DAAC**; MCF files match ESDT descriptor/DLL
- \* ODL files for PGE registration supplied by MODIS are complete and finalized with delivery of PGE’s
- \* ODL files for production rule implementation supplied by MODIS

### **Approach - Phase I (October 1 - January 31):**

- \* **perform early -SSIT (PGE installation/CM, inspection, infusion)** intent is to identify and report problems as early as possible

- \* **15 PGE's will be worked on in Phase I as per SDST delivery schedule** (PGE 1, 2, 3, 5, 7, 9, 10, 11, 12, 13, 20, 21, 49, 50, 53)
- \* because of uncertainties associated with drop #2, integration and test SSI&T activities is not scheduled to start before Jan 31; however, the DAAC is prepared to take advantage of drop #2 if available
- \* **performance and chain testing is deferred until availability of ECS launch version (Jan 31)**

### ***Approach - Phase II (January 31 - April 15):***

- \* **complete integration and conduct performance and chain testing in priority order in preparation for certification testing;** conduct SSI&T for PGE 4
- \* **3 PGE's are scheduled to complete SSI&T at the GSFC DAAC by March 2** to begin qualification (and certification) testing (PGE 1, 2, 3); late availability of PGE 1 and 3 is a limiting factor
- \* **13 additional PGE's are scheduled to complete SSI&T at the GSFC DAAC by April 15** for provisional acceptance for certification testing (PGE 4, 5, 7, 9, 10, 11, 12, 13, 20, 21, 49, 50, 53)
- \* begin SSI&T for post-certification PGE's (delivery schedule from SDST is TBD)

### ***Approach - Phase III (April 15 - June 1):***

- \* **perform SSI&T for remaining TBD PGE's in priority order in preparation for launch**
- \* **perform expedited SSI&T for 2.1 versions of PGE's;** number of 2.1 PGE's that can be completed in time for launch is TBD
- \* perform SSI&T for PGE's to be operational post-launch
- \* following PGE's are scheduled to be completed in Phase III (PGE list TBD); SDST schedule of remaining at launch PGE's is TBD

### ***Schedule Assumptions:***

- \* integration and test takes 12 workdays (based on version 1 experience)
- \* chaining and performance testing takes 16 workdays per defined chain (total chains is 4 - 8, chain definition to be coordinated with SDST)
- \* allow 25% schedule overhead (7 work days) to I&T and chain testing for fixes from SDST; 2-day nominal turnaround to the DAAC is expected for PGE fixes for bugs and standards problems encountered
- \* 5 PGE's can be actively worked concurrently at the GSFC DAAC
- \* **compared to version 1 SSI&T this is a very aggressive schedule**

### ***Risks:***

- \* **late availability or major remedial work for PGE 1 and 3**
  - chain testing beyond PGE 3 is delayed because of late availability of PGE's 1 and 3
  - > investigating reuse of version PGE 1 as version 2 test driver
  - > PGE 1 will be given highest priority and other DAAC SSI&T work suspended as necessary
- \* **potential non-availability of SSI&T resources (cpu, disk space)** due to ECS and other instrument team testing at GSFC DAAC and possible non-availability of SSI&T capability during certification testing:
  - reduces number of PGEs that can be integrated by launch
  - > additional SSI&T capability at the GSFC DAAC would reduce resource conflicts between GSFC DAAC and ECS/ESDIS use of GSFC system
- \* **PGE standards not met or response delays to correct PGE problems encountered:**
  - reduced number of PGE's that can be integrated by launch
  - > SDST/DAAC protocol being changed to reduce overhead associated with fixing PGE problems
- \* **uncertainty of or delays in availability of ECS capabilities for each drop:**
  - land tiling production rules needed in drop #3
  - availability of drop #3 fixes without having to accept untested functionality in drop #4
  - > extended testbed is being used at present pending availability of drop #1
  - > GSFC DAAC reserves right to not incorporate drop #4 capabilities until they have been fully tested
- \* schedule impacts depending on resolution of day/night flag interpretation